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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/781,325  
Filing Date: February 17, 2004  
Appellant(s): PIISPANEN ET AL.

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Keith R. Obert  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 2/13/2012 appealing from the Office action mailed 4/6/2011.

**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

Claims 31-66 are pending and rejected.

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN

REJECTIONS.” New grounds of rejection (if any) are provided under the subheading “NEW GROUNDS OF REJECTION.”

**(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant’s brief.

**(8) Evidence Relied Upon**

2007/0016695	Rabbers et al	1-2007
7,395,281	Edwards	7-2008

Applicant Admitted Prior Art (Applicant's own Specification pages 1-10)

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 31-35, 37-39, 41-43, 45-50, 52-54, 56-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) disclosed in pages 1-10 of the instant specification, in view of Rabbers et al (Rabbers), US 2007/0016695.
2. As per claim 31, AAPA taught the invention including a method comprising:
  - a. Establishing a transport connection, between a first synchronization agent associated with a first data store in a first device and a second synchronization agent associated with a second data store in a second device (page 2, lines 21-29, page 9, lines 31-33, page 10, lines 1-7);

- b. Preparing a message comprising a command for synchronizing said second data store (page 6, lines 14-24), said command comprising at least one data identification element, embedded in said command, identifying a folder associated with at least one modification in the first data store (page 1, lines 24-31, page 2, lines 1-29, page 7, lines 8-17, page 9, lines 21-24); and
  - c. Communicating said message to said second synchronization agent via the established transport connection (page 1, lines 24-31, page 2, lines 1-29),
  - d. Wherein the at least one data identification element, embedded in said command, is contained in at least one non-data element of the message (page 7, lines 12-17).
- 3. AAPA does not teach the message to comprise a command with respect to change in the directory structure of said first data store or identifying a folder associated with at least one modification in the directory structure of the first data store. Rabbers taught to use message with IDs to determine changes in the directory structure and to synchronize the directory structure when determined the directory structure has changed (pp. 0006, 0052, 0130-133, 0150). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Rabbers because Rabber's teaching of determining directory structure change using IDs would allow AAPA's system to know whether to perform delta extract or full extract for synchronization.
- 4. As per claim 38, AAPA taught the invention including a method comprising:

- a. Establishing a transport connection between a first synchronization agent associated with a first data store and a second synchronization agent associated with a second data store (page 2, lines 21-29, page 9, lines 31-33, page 10, lines 1-7);
  - b. Receiving a synchronization message, at said second synchronization agent via said transport connection, comprising a command for synchronizing said second data store (page 6, lines 14-24) with respect to directory structure of said first data store (page 1, lines 24-31, page 2, lines 1-29, page 7, lines 8-12: identify folders), said command comprises at least one data identification element, embedded in said command, identifying a folder associated with at least one modification in the first data store (page 7, lines 8-17, page 9, lines 21-24); and
  - c. Making changes to the directory structure of the second data store based on the information conveyed by said command included in the message and the at least one data identification element embedded in said command (page 1, lines 17-31, page 2, lines 1-29, page 9, lines 21-24),
  - d. Wherein the at least one data identification element, embedded in said command, is contained in a non-data element of the message (page 7, lines 12-17).
5. AAPA does not teach the message to comprise a command with respect to change in the directory structure of said first data store or identifying a folder associated with at least one modification in the directory structure of the first data store. Rabbers taught to use message with IDs to determine changes in the directory structure and to synchronize the directory structure

when determined the directory structure has changed (pp. 0006, 0052, 0130-133, 0150). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Rabbers because Rabber's teaching of determining directory structure change using IDs would allow AAPA's system to know whether to perform delta extract or full extract for synchronization.

6. As per claim 46, AAPA taught the invention including a device, comprising:
  - a. A data store configured to store data as data items in folders, the folders defining a directory structure (page 1, lines 24-31, page 4, lines 15-30), and
  - b. A synchronization agent configured to synchronize said data store with another data store of another device (page 1, lines 24-31, page 2, lines 21-29);
  - c. Wherein the synchronization agent being further configured to cause the device to perform at least the following:
    - i. Establishing a transport connection between said synchronization agent and another synchronization agent, of said another device, associated with said another data store (page 2, lines 21-29, page 9, lines 31-33, page 10, lines 1-7);
    - ii. Receive a synchronization message, via said transport connection, comprising a command for synchronizing said data store (page 6, lines 14-24) with respect to directory structure (page 1, lines 24-31, page 2, lines 1-29, page 7, lines 8-12: identify folders), said command comprises at least one data identification element, embedded in said command, identifying a

folder associated with at least one modification in said another data store (page 7, lines 8-17, page 9, lines 21-24); and

- iii. Make changes to the directory structure of said data store based at least in part on the information conveyed by said command included in the message and the at least one data identification element embedded in said command (page 1, lines 17-31, page 2, lines 1-29, page 9, lines 21-24),
- iv. Wherein the at least one data identification element, embedded in said command, is contained in a non-data element of the message (page 7, lines 12-17).

7. AAPA does not teach the message to comprise a command with respect to change in the directory structure of said another data store or identifying a folder associated with at least one modification in the directory structure of said another data store. Rabbers taught to use message with IDs to determine changes in the directory structure and to synchronize the directory structure when determined the directory structure has changed (pp. 0006, 0052, 0130-133, 0150). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Rabbers because Rabber's teaching of determining directory structure change using IDs would allow AAPA's system to know whether to perform delta extract or full extract for synchronization.

8. As per claim 57, AAPA taught the invention including a device, comprising:



- a. A data store configured to store data as data items in folders, the folders defining a directory structure (page 1, lines 24-31, page 4, lines 15-30), and
- b. A synchronization agent configured to synchronize said data store with another data store of another device (page 1, lines 24-31, page 2, lines 21-29);
- c. Wherein the synchronization agent being further configured to cause the device to perform at least the following:
  - i. Establishing a transport connection between said synchronization agent and another synchronization agent, of said another device, associated with said another data store (page 2, lines 21-29, page 9, lines 31-33, page 10, lines 1-7);
  - ii. Preparing a synchronization message comprising a command for synchronizing said another data store (page 6, lines 14-24) with respect to a directory structure (page 1, lines 24-31, page 2, lines 1-29, page 7, lines 8-12: identify folders), said command comprising at least one data identification element, embedded in said command, identifying a folder associated with at least one modification in said data store (page 7, lines 8-17, page 9, lines 21-24); and
  - iii. Communicating said synchronization message to said another synchronization agent via said transport connection (page 1, lines 24-31, page 2, lines 1-29),

- iv. Wherein the at least one data identification element, embedded in said command, is contained in at least one non-data element of the message (page 7, lines 12-17).

9. AAPA does not teach the message to comprise a command with respect to change in the directory structure of said data store or identifying a folder associated with at least one modification in the directory structure of the data store. Rabbers taught to use message with IDs to determine changes in the directory structure and to synchronize the directory structure when determined the directory structure has changed (pp. 0006, 0052, 0130-133, 0150). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Rabbers because Rabber's teaching of determining directory structure change using IDs would allow AAPA's system to know whether to perform delta extract or full extract for synchronization.

10. As per claims 32, 39, 47-48 and 58-59, AAPA further taught that wherein the command and the at least one data identification element comprise information about said at least one modification associated with said folder and wherein the message further comprises at least one data element comprising information about a change in data items in the first data store (page 1, lines 27-31, page 2, lines 1-9, page 7, lines 7-34, page 8, lines 1-34, page 9, lines 1-7).

11. As per claims 33, 41, 52 and 62, AAPA further taught that wherein the at least one data identification element, embedded in said command or operational element, comprises at least one of a target element and a source element (page 7, lines 8-17).

12. As per claims 34, 42, 53 and 63, AAPA further taught that wherein the message is a syncML message and said command is a syncML protocol command element (page 6, lines 12-24, page 9, lines 12-16).

13. As per claims 35, 43, 54 and 64, AAPA further taught that wherein the data identification element comprises a LocURI element (page 7, lines 8-17).

14. As per claims 37, 45, 56 and 66, AAPA further taught that wherein the at least one data identification element, embedded in said command, comprises an identification and a path of said folder (page 7, lines 8-17).

15. As per claims 49 and 60, AAPA further taught that wherein the device comprises one of a wireless communication terminal and a wireline communication terminal (page 1, lines 17-24, page 2, lines 10-29).

16. As per claim 50, AAPA further taught that wherein the device is operative as a server in a client server model and comprises a sync engine configured to resolve conflicts posed by the message (page 1, lines 17-31, page 2, lines 1-9).

17. As per claim 61, AAPA further taught that wherein the device is operative as a client (page 1, lines 17-24, page 2, lines 30-33).

18. Claims 36, 40, 44, 51, 55 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Rabbers as applied to claims 33-35, 37-39, 41-43, 45-50, 52-54, 56-64 and 66 above, and further in view of Edwards, US 7,395,281.

19. As per claims 36, 44, 55 and 65, AAPA and Rabbers taught the invention as claimed in claims 31, 38, 46 and 57. AAPA and Rabbers did not specifically teach that wherein said command relates to a folder manipulation operation comprising one or more of renaming a folder, creating a new folder, moving a folder and moving a data item from one folder to another folder. Edwards taught to use recorded tree structures to determine the changes of the items (both data file and folder) and to synchronize the data files and folders including adding, deleting a folder and moving a data item from one folder to another folder (col.3, lines 35-67, col.4, lines 38-67, col.5, lines 1-7). Edwards further taught that the recorded tree structure can be sent on a transportable medium to the second location for comparison (col.2, lines 10-16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Edwards and include Edwards' tree structure in the command message for sending it to the second data store for comparing the changes made to the files and the folder structures in order to synchronize the data files and folder structures with the latest recorded tree structure of items..

20. As per claim 40 and 51, AAPA and Rabbers taught the invention as claimed in claims 38 and 46. AAPA and Rabbers did not specifically teach to further comprise extracting, by said synchronization agent, information about said change in the directory structure from the command and the at least one data identification element and providing the information to either a synchronization engine or to an application entity. Edwards taught to send recorded tree structures to the second data store for comparison by a Synchronizer to determine the changes of the items (both data file and folder) and to synchronize the data files and folders including adding, deleting a folder and moving a data item from one folder to another folder (col.2, lines 10-16, col.3, lines 35-67, col.4, lines 38-67, col.5, lines 1-7). In Edwards' teaching, the Synchronizer includes the functionalities of a synchronization agent and a synchronization engine (page 4, lines 38-64). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Edwards and include Edwards' tree structure in the command message for sending it to a Synchronizer of a second data store for comparing the changes made to the files and the folder structures in order to synchronize the data files and folder structures with the latest recorded tree structure of items.

#### **(10) Response to Argument**

The examiner summarizes the various points raised by the appellant and addresses replies individually.

As per appellant's argument that:

(1) AAPA and Rabbers fail to disclose “the command message is for synchronizing the second data store with respect to a change in the directory structure of the first data store and a message including a command for synchronizing the second data store with respect to a change in the directory structure of the first data store, the command including at least one data identification element, embedded in the command, identifying a folder associated with at least one modification in the directory structure of the first data store. AAPA page 2, lines 21-33 states “with SyncML, data items, but not yet data structure, can be synchronized on different devices connected via one or more interconnecting networks.” Therefore, the AAPA does not provide a solution for synchronizing directory structure, but instead merely identifies a problem. Appellant argued that the change of structure in Rabbers is not a change in the directory structure. The combination of the art is not possible since it would at most lead to a full synchronization each time there is a change in the structure of database.

In reply to (1), in response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

AAPA disclose the known process of synchronizing data and structure of two different data stores. AAPA, in page 1, line 31 to page 2, lines 1-9 clearly stated “*In synchronizing respective data store (i.e. synchronizing both the data items and data structure of the two data stores) used by two applications running on different equipment the contents of the two data*

*stores are set to correspond to each other..., and changes are made to either the data items or their organization or both in one or both of the data stores*”).

AAPA in page 9, lines 21-24 further indicated “Communicating changes in a directory structure is not problematic if the same application takes care of handling the data and handling the communication according to a synchronization protocol.” and described that it can be done by using SyncML Synchronization Protocol, a product of SyncML Initiative, using sync agent (see pages 9-10 of the specification). This provides strong motivation to modify SyncML to synchronize data structure changes.

AAPA further references the use of SyncML for synchronizing data stores in page 2 admitting SyncML as a well known open industry standard. Page 2, lines 10-18 recites “A facility is being developed for synchronizing such data stores based on what is called SyncML (synchronization markup language), being developed under the so-called SyncML Initiative. (see <http://www.syncml.org/> for information about SyncML, including standards and specifications for SyncML, and the SyncML Initiative, especially including the SyncML Representation Protocol and the SyncML Sync Protocol.) SyncML is and open industry standard for a common language for universal synchronization of remote data.”

AAPA in pages 7-9 further disclosed details about SyncML using identifiers to identify data units or folders (page 7, lines 8-9) included in element types (e.g. commands) (page 7, lines 9-12, 26-33, page 8-page 9, line 19).

Accordingly, AAPA disclosed preparing a message comprising a command for synchronizing said second data store (page 6, lines 14-24), said command comprising at least one data identification element, embedded in said command, identifying a folder associated with at

least one modification in the first data store (page 1, lines 24-31, page 2, lines 1-29, page 7, lines 8-17, page 8, lines 20-25, page 9, lines 21-24). The only lacking element in AAPA is identifying at least one modification in the directory structure of the first data store.

Rabbers disclosed in paragraph 0052 that “*if structure of main database 112 (FIG. 1) changed since the previous extract, then computer system 204 would then perform a full extract rather than attempt to perform a delta extract*”; in paragraph 0131 that “*sync client 401 gets the locally stored extraction ID with the extraction ID downloaded from server 116 for comparison. As previously described, the extraction ID identifies the version of the database extract. For example, if the database structure on server 116 has changed, the extraction IDs will be different.*”; and in paragraph 0133 that “*if sync client 401 determines in block 1303 that extraction IDs do not match, the operation flow proceeds to a block 1307. In block 1307. Sync client 401 requests a full extract from server 116. Server 116 then provides the full extract, which is then received by sync client 401.*” (See also Fig. 13 flowchart) Rabbers then again in paragraph 0150 disclosing that “*if the structure of local database 308 changed (e.g., due to a change in the main database 112 or the visibility rules) since the last synchronization operation, then the extraction IDs would be different and sync client would request a full extract. If the structure of local database 308 has not changed, then the extraction IDs would be the same and sync client 401 would request a delta extract. Depending on the outcome of block 1609, server 116 sends either a full extract or delta extract to sync client 401 in a block 1611 or a block 1613, respectively.*”

Rabbers' disclosure of “database structure” falls within the definition of “directory structure or data structure” as defined in page 4, lines 26-30 and page 5, lines 25-28 of this



instant application. Page 5, lines 25-28 states “*the terminology directory structure or data structure should also be understood to encompass even a database structure or a record structure...*” Therefore, the change of database structure as taught by Rabbers read on the claimed limitation of modification in the directory structure.

Accordingly, Rabbers taught to synchronize the whole data store if the database structure of the first data store has changed since the last synchronization using an extract ID for identifying modification of database structure. By combining AAPA with Rabbers, it would have been obvious to include the extract ID in the element types of SyncML message and have the first device (e.g. server) perform the comparison to determine whether full extract or delta extract is needed in order to synchronize database structure changes.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Rabbers because Rabber’s teaching of determining directory structure change using IDs would allow AAPA’s system to know whether to perform delta extract or full extract for synchronization.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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